Date: Fri, 7 Oct 94 22:51:47 PDT
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: List
Subject: Info-Hams Digest V94 #1104
To: Info-Hams

Info-Hams Digest   Fri, 7 Oct 94   Volume 94 : Issue 1104

Today's Topics:

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Fri, 7 Oct 1994 15:22:36 GMT
From: dale.piedfort@pcappbbs.com (Dale Piedfort)
Subject: CABLE TV LEAKAGE

If I am correct I believe the maximum allowable is 20 microvolts
at 1 meter, anything other than that is not permissable.

Date: 7 Oct 1994 19:02:40 GMT
From: biekert@phoenix.phoenix.net (Robert Biekert)
Subject: CLARC Balloon Launch

Near Outer Space Transportation System (NOSTS-1)
Balloon Launch - Clear Lake Amateur Radio Club
Sunday - October 9, 1994

***** UPDATE ***** 10/7/94
Balloon launch scheduled for launch window from 10am to 12noon Sun 10/9
from Wharton Airport, Wharton Texas
****

Near Outer Space Transportation System utilizing a 12 foot diameter helium balloon as the launch vehicle. NOSTS-1 is an amateur radio experiment which will carry a various payloads in a package weighing less than 6 pounds. All interested hams are invited to participate.

The payload consists of:

* 2 meter packet on 145.75 MHz simplex - the node name for digipeating is NOSTS-1, the mailbox callsign is KJ5MX-6, the beacon IDs as KJ5MX-3.

* 10 meter voice beacon on 28.322 MHz Double Side-Band with an ID interval of 33 seconds

* Beacon on 29.420 MHz sending "CW" beeps that correspond directly to the outside temperature. At 70 degrees Fahrenheit the beep rate is approximately 200/min. To calculate temperature from beep rate the formula: Temp(degrees F) = [0.56853 X (Beep rate)] - 38
  The antenna for this device is a 2 meter dipole cut to enhance the 5th harmonic at 147.10 MHz for direction finding purposes.

* Beacon on 224.72 MHz for direction finding purposes only.

* Potential secondary payloads may include a 10 GHz gigaplexer beacon and a 2 meter uplink (147.435 MHz), 70 cm downlink (440.95 MHz) FM repeater. Final announcements on these payloads will be made on launch day.

The Clear Lake Amateur Radio Club Balloon Launch Team wishes to thank Andy MacAllister, WA5ZIB and members of the South Texas Balloon Launch Team for assistance, advice, and use of 220 MHz beacon, 29.420 MHz fireball transmitter for this launch.

An informal simultaneous HF (7.155 Mhz or up for QRM) and UHF (442.750 SE Houston | 444.275 MHz NW Houston repeaters) net will be held at 7PM on Saturday October 8th for final updates. The 40 meter net on the same frequency will be active immediately before and during the flight.

The lauch site will be west of the Houston area and the direction of flight will be from west to east. Coverage may extend several states on some modes. Reception reports including frequency, time, and

YOUR location are encouraged.

For additional information and reception reports contact:

Dan Feeback, KJ5MX - (713) 286-0230 [Home] - (713) 483-7189 [Work]
                      Internet: feeback@medics.jsc.nasa.gov
                      Packet: KJ5MX@KA5KTH.#SETX.TX.USA.NOAM
or

John Maca, AB5SS   - (713) 488-2025 [Home] - (713) 244-7774 [Work]
                      Internet: jmaca%jscdk@jesnic.jsc.nasa.gov
                      Packet: AB5SS@KA5KTH.#SETX.TX.USA.NOAM

--
 Robert E. Biekert   KA5GLX   Houston, Texas
 Email: biekert@phoenix.phoenix.net

Date: 7 Oct 1994 15:00:25 -0400
From: tindall@mercury.interpath.net (Bruce Tindall)
Subject: DX Stamp Service?

Can someone please give me the address of the DX Stamp Service
or some other similar service in the U.S.A. that can sell me current
mint postage stamps for foreign countries (especially Japan and China)
for use in lieu of IRC's? Thanks.

73 de N4JIU
--
P. O. Box 447, Morrisville NC 27560 USA.

Date: Fri, 7 Oct 1994 19:32:57 GMT
From: hbrown@nadir.resd (Harry H. Brown)
Subject: Info wanted on a tube...

I have an EIMAC book that shows a 4PR60B/8252. It is Pulse modulator tube.

MAX RATINGS are: Plate Voltage: 20 KV, Screen Voltage: 1.5 KV, Peak plate current:
18 amps, Plate dissapation: 60 watts, Screen dissapation: 8 watts, Grid
dissapation: 1 watt, Max seal temp: 200 degrees C.

Typical OPERATION: Plate Voltage: 20 KV, Screen Voltage: 1.25 KV, Pulse Plate
Voltage: 18.75 KV, Pulse Plate current: 18 amps, Pulse Drive Power: 560 watts,
Pulse Output Power: 337 KW, Duty Factor: 0.001. The picture sure looks husky and

the size of the pins indicates that they don't want much resistance with the currents required.

The filament requires 26 volts at 1.95 to 2.35 amps. Input capacitance is 35 tp 50 pf., Output is 6 to 11 pf, and feedthrough capacitance is 2.0 pf.

Good Luck,
Harry, W3IIT
hbrown@resd.vf.ge.com

Date: 8 Oct 1994 04:24:28 GMT
From: pryack@mtholyoke.edu (Paul Ryack)
Subject: Operation in Bahama's w/US license?

dbarton@unix.cc.emory.edu wrote:
> I will be travelling in the Bahama's and/or Carribean in December and am

The name is spelled, Bahamas. It is not a possessive. There is no apostrophe.

Date: 8 Oct 94 00:42:00 GMT
From: ray.hoad@drig.COM (Ray Hoad)
Subject: orbs$280.1of2.amsat

SB KEPS @ AMSAT $ORBS-280.O
Orbital Elements 280.OSCAR

HR AMSAT ORBITAL ELEMENTS FOR OSCAR SATELLITES
FROM WA5QGD FORT WORTH,TX October 7, 1994
BID: $ORBS-280.O
TO ALL RADIO AMATEURS BT

Satellite: AO-10
Catalog number: 14129
Epoch time: 94274.43486862
Element set: 315
Inclination: 26.8409 deg
RA of node: 305.1981 deg
Eccentricity: 0.6029094
Arg of perigee: 215.5270 deg
Mean anomaly: 82.9344 deg
Mean motion: 2.05880028 rev/day
Decay rate: 9.0e-08 rev/day^2
Epoch rev: 8497

```
Checksum:              314

Satellite: UO-11
Catalog number: 14781
Epoch time:      94280.05570132
Element set:     744
Inclination:       97.7849 deg
RA of node:       289.5407 deg
Eccentricity:    0.0010794
Arg of perigee:   274.8711 deg
Mean anomaly:      85.1258 deg
Mean motion:   14.69250936 rev/day
Decay rate:       1.33e-06 rev/day^2
Epoch rev:           56673
Checksum:              332

Satellite: RS-10/11
Catalog number: 18129
Epoch time:      94279.98552238
Element set:     971
Inclination:       82.9231 deg
RA of node:       246.1970 deg
Eccentricity:    0.0013262
Arg of perigee:    75.2276 deg
Mean anomaly:     285.0348 deg
Mean motion:   13.72342146 rev/day
Decay rate:        3.7e-07 rev/day^2
Epoch rev:           36524
Checksum:              315

Satellite: AO-13
Catalog number: 19216
Epoch time:      94279.82589895
Element set:     980
Inclination:       57.7091 deg
RA of node:       227.1681 deg
Eccentricity:    0.7236196
Arg of perigee:   351.9333 deg
Mean anomaly:       0.7118 deg
Mean motion:    2.09723955 rev/day
Decay rate:      -3.26e-06 rev/day^2
Epoch rev:            4835
Checksum:              343

Satellite: FO-20
Catalog number: 20480
Epoch time:      94280.40939116
Element set:     738
```

```
Inclination:       99.0559 deg
RA of node:        51.1170 deg
Eccentricity:    0.0541207
Arg of perigee:    85.3114 deg
Mean anomaly:     280.9553 deg
Mean motion:   12.83227882 rev/day
Decay rate:        1.0e-08 rev/day^2
Epoch rev:           21852
Checksum:              289

Satellite: AO-21
Catalog number: 21087
Epoch time:      94278.89635359
Element set:     526
Inclination:       82.9361 deg
RA of node:        60.7692 deg
Eccentricity:    0.0035589
Arg of perigee:   133.3909 deg
Mean anomaly:     227.0221 deg
Mean motion:   13.74545850 rev/day
Decay rate:        9.4e-07 rev/day^2
Epoch rev:           18479
Checksum:              340

Satellite: RS-12/13
Catalog number: 21089
Epoch time:      94280.01466294
Element set:     743
Inclination:       82.9199 deg
RA of node:       288.5164 deg
Eccentricity:    0.0029834
Arg of perigee:   154.5663 deg
Mean anomaly:     205.6970 deg
Mean motion:   13.74047489 rev/day
Decay rate:        5.3e-07 rev/day^2
Epoch rev:           18400
Checksum:              332

Satellite: ARSENE
Catalog number: 22654
Epoch time:      94278.90721955
Element set:     291
Inclination:        2.0802 deg
RA of node:        94.2592 deg
Eccentricity:    0.2911798
Arg of perigee:   193.1780 deg
Mean anomaly:     157.9888 deg
Mean motion:    1.42203095 rev/day
```

```
Decay rate:       -8.7e-07 rev/day^2
Epoch rev:             277
Checksum:              322

/EX
SB KEPS @ AMSAT  $ORBS-280.D
Orbital Elements  280.MICROS

HR AMSAT ORBITAL ELEMENTS FOR THE MICROSATS
FROM WA5QGD FORT WORTH,TX October 7, 1994
BID: $ORBS-280.D
TO ALL RADIO AMATEURS BT

Satellite: UO-14
Catalog number: 20437
Epoch time:      94280.18867452
Element set:      43
Inclination:       98.5863 deg
RA of node:         3.4207 deg
Eccentricity:    0.0010360
Arg of perigee:   220.3418 deg
Mean anomaly:     139.6999 deg
Mean motion:   14.29856915 rev/day
Decay rate:        1.0e-08 rev/day^2
Epoch rev:           24559
Checksum:              311

Satellite: AO-16
Catalog number: 20439
Epoch time:      94280.24002223
Element set:     841
Inclination:       98.5955 deg
RA of node:         4.8269 deg
Eccentricity:    0.0010596
Arg of perigee:   221.8837 deg
Mean anomaly:     138.1539 deg
Mean motion:   14.29910670 rev/day
Decay rate:       -9.0e-08 rev/day^2
Epoch rev:           24561
Checksum:              307

Satellite: DO-17
Catalog number: 20440
Epoch time:      94280.25338488
Element set:     842
Inclination:       98.5962 deg
RA of node:         5.2019 deg
Eccentricity:    0.0010818
```

```
Arg of perigee:   220.2754 deg
Mean anomaly:     139.7626 deg
Mean motion:   14.30050727 rev/day
Decay rate:        5.0e-08 rev/day^2
Epoch rev:           24563
Checksum:              292

Satellite: WO-18
Catalog number: 20441
Epoch time:      94280.23074718
Element set:     845
Inclination:       98.5956 deg
RA of node:         5.1710 deg
Eccentricity:    0.0011296
Arg of perigee:   220.7550 deg
Mean anomaly:     139.2789 deg
Mean motion:   14.30024326 rev/day
Decay rate:       -1.7e-07 rev/day^2
Epoch rev:           24563
Checksum:              292

Satellite: LO-19
Catalog number: 20442
Epoch time:      94279.78155006
Element set:     840
Inclination:       98.5966 deg
RA of node:         5.0139 deg
Eccentricity:    0.0011562
Arg of perigee:   222.0533 deg
Mean anomaly:     137.9763 deg
Mean motion:   14.30122291 rev/day
Decay rate:        1.1e-07 rev/day^2
Epoch rev:           24558
Checksum:              288

Satellite: UO-22
Catalog number: 21575
Epoch time:      94280.17559102
Element set:     547
Inclination:       98.4264 deg
RA of node:       352.3581 deg
Eccentricity:    0.0007497
Arg of perigee:   322.8605 deg
Mean anomaly:      37.2069 deg
Mean motion:   14.36934048 rev/day
Decay rate:        2.5e-07 rev/day^2
Epoch rev:           16916
Checksum:              316
```

```
Satellite: KO-23
Catalog number: 22077
Epoch time:      94280.43439393
Element set:     440
Inclination:       66.0816 deg
RA of node:        44.9601 deg
Eccentricity:    0.0015333
Arg of perigee:   260.6656 deg
Mean anomaly:      99.2625 deg
Mean motion:   12.86287889 rev/day
Decay rate:       -3.7e-07 rev/day^2
Epoch rev:           10122
Checksum:              309

Satellite: AO-27
Catalog number: 22825
Epoch time:      94276.09844924
Element set:     338
Inclination:       98.6450 deg
RA of node:       350.7766 deg
Eccentricity:    0.0007917
Arg of perigee:   257.5293 deg
Mean anomaly:     102.5036 deg
Mean motion:   14.27636072 rev/day
Decay rate:        3.4e-07 rev/day^2
Epoch rev:            5308
Checksum:              322

Satellite: IO-26
Catalog number: 22826
Epoch time:      94276.14163591
Element set:     336
Inclination:       98.6421 deg
RA of node:       350.8706 deg
Eccentricity:    0.0008492
Arg of perigee:   256.8184 deg
Mean anomaly:     103.2049 deg
Mean motion:   14.27740626 rev/day
Decay rate:        2.0e-08 rev/day^2
Epoch rev:            5309
Checksum:              303

Satellite: KO-25
Catalog number: 22830
Epoch time:      94280.19155718
Element set:     344
Inclination:       98.5460 deg
```

```
RA of node:       350.9336 deg
Eccentricity:    0.0010876
Arg of perigee:   205.6748 deg
Mean anomaly:     154.3899 deg
Mean motion:   14.28065096 rev/day
Decay rate:        5.0e-08 rev/day^2
Epoch rev:            5368
Checksum:              327

Satellite: 22828
Catalog number: 22828
Epoch time:      94276.12717540
Element set:     315
Inclination:       98.6410 deg
RA of node:       350.8797 deg
Eccentricity:    0.0009370
Arg of perigee:   240.5615 deg
Mean anomaly:     119.4653 deg
Mean motion:   14.28068001 rev/day
Decay rate:        4.7e-07 rev/day^2
Epoch rev:            2118
Checksum:              309

/EX

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Date: 8 Oct 94 00:44:00 GMT
From: ray.hoad@drig.COM (Ray Hoad)
Subject: orbs$280.2l.amsat

SB KEPS @ AMSAT  $ORBS-280.N
2Line Orbital Elements 280.AMSAT

HR AMSAT ORBITAL ELEMENTS FOR AMATEUR SATELLITES IN NASA FORMAT
FROM WA5QGD FORT WORTH,TX October 7, 1994
BID: $ORBS-280.N

DECODE 2-LINE ELSETS WITH THE FOLLOWING KEY:
1 AAAAAU 00  0  0 BBBBB.BBBBBBBB  .CCCCCCCC  00000-0  00000-0 0  DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

TO ALL RADIO AMATEURS BT

AO-10
1 14129U 83058B   94274.43486862  .00000009  00000-0  10000-3 0  3153
```

2 14129 26.8409 305.1981 6029094 215.5270 82.9344 2.05880028 84978
UO-11
1 14781U 84021B   94280.05570132 .00000133 00000-0 30314-4 0 7442
2 14781 97.7849 289.5407 0010794 274.8711 85.1258 14.69250936566734
RS-10/11
1 18129U 87054A   94279.98552238 .00000037 00000-0 24189-4 0 9716
2 18129 82.9231 246.1970 0013262 75.2276 285.0348 13.72342146365243
AO-13
1 19216U 88051B   94279.82589895 -.00000326 00000-0 10000-4 0 9803
2 19216 57.7091 227.1681 7236196 351.9333   0.7118 2.09723955 48357
FO-20
1 20480U 90013C   94280.40939116 .00000001 00000-0 66623-4 0 7382
2 20480 99.0559 51.1170 0541207 85.3114 280.9553 12.83227882218522
AO-21
1 21087U 91006A   94278.89635359 .00000094 00000-0 82657-4 0 5263
2 21087 82.9361 60.7692 0035589 133.3909 227.0221 13.74545850184794
RS-12/13
1 21089U 91007A   94280.01466294 .00000053 00000-0 39986-4 0 7436
2 21089 82.9199 288.5164 0029834 154.5663 205.6970 13.74047489184009
ARSENE
1 22654U 93031B   94278.90721955 -.00000087 00000-0 00000 0 0 2913
2 22654   2.0802 94.2592 2911798 193.1780 157.9888 1.42203095 2778
UO-14
1 20437U 90005B   94280.18867452 .00000001 00000-0 17448-4 0   433
2 20437 98.5863   3.4207 0010360 220.3418 139.6999 14.29856915245594
AO-16
1 20439U 90005D   94280.24002223 -.00000009 00000-0 13633-4 0 8416
2 20439 98.5955   4.8269 0010596 221.8837 138.1539 14.29910670245619
DO-17
1 20440U 90005E   94280.25338488 .00000005 00000-0 18740-4 0 8424
2 20440 98.5962   5.2019 0010818 220.2754 139.7626 14.30050727245631
WO-18
1 20441U 90005F   94280.23074718 -.00000017 00000-0 10385-4 0 8450
2 20441 98.5956   5.1710 0011296 220.7550 139.2789 14.30024326245633
LO-19
1 20442U 90005G   94279.78155006 .00000011 00000-0 21381-4 0 8405
2 20442 98.5966   5.0139 0011562 222.0533 137.9763 14.30122291245582
UO-22
1 21575U 91050B   94280.17559102 .00000025 00000-0 23148-4 0 5476
2 21575 98.4264 352.3581 0007497 322.8605 37.2069 14.36934048169167
KO-23
1 22077U 92052B   94280.43439393 -.00000037 00000-0 10000-3 0 4403
2 22077 66.0816 44.9601 0015333 260.6656 99.2625 12.86287889101225
AO-27
1 22825U 93061C   94276.09844924 .00000034 00000-0 31673-4 0 3384
2 22825 98.6450 350.7766 0007917 257.5293 102.5036 14.27636072 53085
IO-26
1 22826U 93061D   94276.14163591 .00000002 00000-0 18561-4 0 3369

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2 22826  98.6421 350.8706 0008492 256.8184 103.2049 14.27740626 53093
KO-25
1 22830U 93061H   94280.19155718  .00000005  00000-0  19554-4 0  3441
2 22830  98.5460 350.9336 0010876 205.6748 154.3899 14.28065096 53684
22828
1 22828U 93061F   94276.12717540  .00000047  00000-0  36568-4 0  3151
2 22828  98.6410 350.8797 0009370 240.5615 119.4653 14.28068001 21184
NOAA-9
1 15427U 84123A   94280.07285109  .00000047  00000-0  49180-4 0  9810
2 15427  99.0382 331.8016 0014179 264.4499  95.5060 14.13647422506060
NOAA-10
1 16969U 86073A   94280.01837931  .00000028  00000-0  30001-4 0  8829
2 16969  98.5098 285.6156 0013771   7.2432 352.8945 14.24907436418427
MET-2/17
1 18820U 88005A   94280.16559409  .00000061  00000-0  41446-4 0  4278
2 18820  82.5443 179.5150 0015090 225.5626 134.4304 13.84722814337853
MET-3/2
1 19336U 88064A   94280.37364702  .00000051  00000-0  10000-3 0  3391
2 19336  82.5377 244.2864 0017353 347.4174  12.6506 13.16969436298024
NOAA-11
1 19531U 88089A   94279.95078024  .00000013  00000-0  32277-4 0  7984
2 19531  99.1813 271.6559 0011546 175.6535 184.4743 14.13018598310922
MET-2/18
1 19851U 89018A   94278.87625758  .00000016  00000-0  14818-5 0  3402
2 19851  82.5177  55.6653 0012800 276.8640  83.1229 13.84372952283002
MET-3/3
1 20305U 89086A   94280.21738469  .00000044  00000-0  10000-3 0  1662
2 20305  82.5540 192.5175 0007367  21.7005 338.4447 13.04410031237501
MET-2/19
1 20670U 90057A   94280.56321360  .00000043  00000-0  25068-4 0  8413
2 20670  82.5454 119.2255 0015007 187.7959 172.2974 13.84180733216165
FY-1/2
1 20788U 90081A   94279.07116574 -.00000027  00000-0  10000-4 0  1385
2 20788  98.8211 295.6389 0016428  67.8762 292.4146 14.01324652209237
MET-2/20
1 20826U 90086A   94279.89406198  .00000050  00000-0  31761-4 0  8500
2 20826  82.5225  57.0952 0014686  93.0632 267.2207 13.83590059203206
MET-3/4
1 21232U 91030A   94280.49972184  .00000050  00000-0  10000-3 0  7481
2 21232  82.5379  90.1968 0012029 268.3814  91.5928 13.16464985166133
NOAA-12
1 21263U 91032A   94280.03736640  .00000108  00000-0  67579-4 0  2160
2 21263  98.6093 305.3108 0012029 274.3450  85.6355 14.22453054176400
MET-3/5
1 21655U 91056A   94280.27938026  .00000051  00000-0  10000-3 0  7460
2 21655  82.5532  37.5695 0012228 280.2757  79.6986 13.16834162151217
MET-2/21
1 22782U 93055A   94280.57718550  .00000053  00000-0  35381-4 0  3495
```

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2 22782  82.5469 117.3866 0021298 273.4139  86.4563 13.83016031 55626
POSAT
1 22829U 93061G   94276.13467659 -.00000002  00000-0  17110-4 0  3307
2 22829  98.6424 350.9057 0009325 242.1756 117.8479 14.28042098 53107
MIR
1 16609U 86017A   94280.02167417  .00013746  00000-0  19106-3 0  7938
2 16609  51.6465 346.7504 0002920 106.3923 253.7399 15.57299031493441
HUBBLE
1 20580U 90037B   94279.22901726  .00000575  00000-0  42122-4 0  5497
2 20580  28.4701 242.6635 0006329 167.0259 193.0487 14.90685554 45971
GRO
1 21225U 91027B   94280.04311536  .00003287  00000-0  70329-4 0  1545
2 21225  28.4603 175.3775 0003493  41.6689 318.4194 15.41351885 74210
UARS
1 21701U 91063B   94278.86796087  .00001004  00000-0  10867-3 0  6101
2 21701  56.9841  75.5253 0004456  97.5154 262.6386 14.96505569167505
/EX

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Date: 8 Oct 94 00:44:00 GMT
From: ray.hoad@drig.COM (Ray Hoad)
Subject: orbs$280.2of2.amsat

SB KEPS @ AMSAT  $ORBS-280.W
Orbital Elements  280.WEATHER

HR AMSAT ORBITAL ELEMENTS FOR WEATHER SATELLITES
FROM WA5QGD FORT WORTH,TX October 7, 1994
BID: $ORBS-280.W
TO ALL RADIO AMATEURS BT

Satellite: NOAA-9
Catalog number: 15427
Epoch time:      94280.07285109
Element set:     981
Inclination:       99.0382 deg
RA of node:       331.8016 deg
Eccentricity:    0.0014179
Arg of perigee:   264.4499 deg
Mean anomaly:      95.5060 deg
Mean motion:   14.13647422 rev/day
Decay rate:        4.7e-07 rev/day^2
Epoch rev:           50606
Checksum:              312

Satellite: NOAA-10
Catalog number: 16969
```

```
Epoch time:      94280.01837931
Element set:     882
Inclination:       98.5098 deg
RA of node:       285.6156 deg
Eccentricity:    0.0013771
Arg of perigee:     7.2432 deg
Mean anomaly:     352.8945 deg
Mean motion:   14.24907436 rev/day
Decay rate:        2.8e-07 rev/day^2
Epoch rev:           41842
Checksum:              330

Satellite: MET-2/17
Catalog number: 18820
Epoch time:      94280.16559409
Element set:     427
Inclination:       82.5443 deg
RA of node:       179.5150 deg
Eccentricity:    0.0015090
Arg of perigee:   225.5626 deg
Mean anomaly:     134.4304 deg
Mean motion:   13.84722814 rev/day
Decay rate:        6.1e-07 rev/day^2
Epoch rev:           33785
Checksum:              304

Satellite: MET-3/2
Catalog number: 19336
Epoch time:      94280.37364702
Element set:     339
Inclination:       82.5377 deg
RA of node:       244.2864 deg
Eccentricity:    0.0017353
Arg of perigee:   347.4174 deg
Mean anomaly:      12.6506 deg
Mean motion:   13.16969436 rev/day
Decay rate:        5.1e-07 rev/day^2
Epoch rev:           29802
Checksum:              314

Satellite: NOAA-11
Catalog number: 19531
Epoch time:      94279.95078024
Element set:     798
Inclination:       99.1813 deg
RA of node:       271.6559 deg
Eccentricity:    0.0011546
Arg of perigee:   175.6535 deg
```

```
Mean anomaly:     184.4743 deg
Mean motion:   14.13018598 rev/day
Decay rate:        1.3e-07 rev/day^2
Epoch rev:           31092
Checksum:              327

Satellite: MET-2/18
Catalog number: 19851
Epoch time:      94278.87625758
Element set:     340
Inclination:       82.5177 deg
RA of node:        55.6653 deg
Eccentricity:    0.0012800
Arg of perigee:   276.8640 deg
Mean anomaly:      83.1229 deg
Mean motion:   13.84372952 rev/day
Decay rate:        1.6e-07 rev/day^2
Epoch rev:           28300
Checksum:              324

Satellite: MET-3/3
Catalog number: 20305
Epoch time:      94280.21738469
Element set:     166
Inclination:       82.5540 deg
RA of node:       192.5175 deg
Eccentricity:    0.0007367
Arg of perigee:    21.7005 deg
Mean anomaly:     338.4447 deg
Mean motion:   13.04410031 rev/day
Decay rate:        4.4e-07 rev/day^2
Epoch rev:           23750
Checksum:              270

Satellite: MET-2/19
Catalog number: 20670
Epoch time:      94280.56321360
Element set:     841
Inclination:       82.5454 deg
RA of node:       119.2255 deg
Eccentricity:    0.0015007
Arg of perigee:   187.7959 deg
Mean anomaly:     172.2974 deg
Mean motion:   13.84180733 rev/day
Decay rate:        4.3e-07 rev/day^2
Epoch rev:           21616
Checksum:              305
```

```
Satellite: FY-1/2
Catalog number: 20788
Epoch time:      94279.07116574
Element set:     138
Inclination:       98.8211 deg
RA of node:       295.6389 deg
Eccentricity:    0.0016428
Arg of perigee:    67.8762 deg
Mean anomaly:     292.4146 deg
Mean motion:   14.01324652 rev/day
Decay rate:       -2.7e-07 rev/day^2
Epoch rev:           20923
Checksum:              323

Satellite: MET-2/20
Catalog number: 20826
Epoch time:      94279.89406198
Element set:     850
Inclination:       82.5225 deg
RA of node:        57.0952 deg
Eccentricity:    0.0014686
Arg of perigee:    93.0632 deg
Mean anomaly:     267.2207 deg
Mean motion:   13.83590059 rev/day
Decay rate:        5.0e-07 rev/day^2
Epoch rev:           20320
Checksum:              303

Satellite: MET-3/4
Catalog number: 21232
Epoch time:      94280.49972184
Element set:     748
Inclination:       82.5379 deg
RA of node:        90.1968 deg
Eccentricity:    0.0012029
Arg of perigee:   268.3814 deg
Mean anomaly:      91.5928 deg
Mean motion:   13.16464985 rev/day
Decay rate:        5.0e-07 rev/day^2
Epoch rev:           16613
Checksum:              330

Satellite: NOAA-12
Catalog number: 21263
Epoch time:      94280.03736640
Element set:     216
Inclination:       98.6093 deg
RA of node:       305.3108 deg
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Eccentricity:    0.0012029
Arg of perigee:   274.3450 deg
Mean anomaly:      85.6355 deg
Mean motion:   14.22453054 rev/day
Decay rate:       1.08e-06 rev/day^2
Epoch rev:           17640
Checksum:              271

Satellite: MET-3/5
Catalog number: 21655
Epoch time:      94280.27938026
Element set:     746
Inclination:       82.5532 deg
RA of node:        37.5695 deg
Eccentricity:    0.0012228
Arg of perigee:   280.2757 deg
Mean anomaly:      79.6986 deg
Mean motion:   13.16834162 rev/day
Decay rate:        5.1e-07 rev/day^2
Epoch rev:           15121
Checksum:              317

Satellite: MET-2/21
Catalog number: 22782
Epoch time:      94280.57718550
Element set:     349
Inclination:       82.5469 deg
RA of node:       117.3866 deg
Eccentricity:    0.0021298
Arg of perigee:   273.4139 deg
Mean anomaly:      86.4563 deg
Mean motion:   13.83016031 rev/day
Decay rate:        5.3e-07 rev/day^2
Epoch rev:            5562
Checksum:              315

/EX
SB KEPS @ AMSAT  $ORBS-280.M
Orbital Elements  280.MISC

HR AMSAT ORBITAL ELEMENTS FOR MANNED AND MISCELLANEOUS SATELLITES
FROM WA5QGD FORT WORTH,TX October 7, 1994
BID: $ORBS-280.M
TO ALL RADIO AMATEURS BT

Satellite: POSAT
Catalog number: 22829
Epoch time:      94276.13467659
```

```
Element set:     330
Inclination:       98.6424 deg
RA of node:       350.9057 deg
Eccentricity:    0.0009325
Arg of perigee:   242.1756 deg
Mean anomaly:     117.8479 deg
Mean motion:   14.28042098 rev/day
Decay rate:       -2.0e-08 rev/day^2
Epoch rev:            5310
Checksum:              304

Satellite: MIR
Catalog number: 16609
Epoch time:      94280.02167417
Element set:     793
Inclination:       51.6465 deg
RA of node:       346.7504 deg
Eccentricity:    0.0002920
Arg of perigee:   106.3923 deg
Mean anomaly:     253.7399 deg
Mean motion:   15.57299031 rev/day
Decay rate:     1.3746e-04 rev/day^2
Epoch rev:           49344
Checksum:              317

Satellite: HUBBLE
Catalog number: 20580
Epoch time:      94279.22901726
Element set:     549
Inclination:       28.4701 deg
RA of node:       242.6635 deg
Eccentricity:    0.0006329
Arg of perigee:   167.0259 deg
Mean anomaly:     193.0487 deg
Mean motion:   14.90685554 rev/day
Decay rate:       5.75e-06 rev/day^2
Epoch rev:            4597
Checksum:              323

Satellite: GRO
Catalog number: 21225
Epoch time:      94280.04311536
Element set:     154
Inclination:       28.4603 deg
RA of node:       175.3775 deg
Eccentricity:    0.0003493
Arg of perigee:    41.6689 deg
Mean anomaly:     318.4194 deg
```

```
Mean motion:   15.41351885 rev/day
Decay rate:      3.287e-05 rev/day^2
Epoch rev:            7421
Checksum:              292

Satellite: UARS
Catalog number: 21701
Epoch time:      94278.86796087
Element set:     610
Inclination:       56.9841 deg
RA of node:        75.5253 deg
Eccentricity:    0.0004456
Arg of perigee:    97.5154 deg
Mean anomaly:     262.6386 deg
Mean motion:   14.96505569 rev/day
Decay rate:      1.004e-05 rev/day^2
Epoch rev:           16750
Checksum:              324

/EX

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Date: Sat,  8 Oct 94 04:24:34 GMT
From: srghsjm@grv.grace.cri.nz
Subject: VHF/UHF/SHF records in USA.  Info ?

Can anyone in the USA tell me who maintains your VHF/UHF/SHF and above
distance records ?  I had a name and an address that is some years old
but a letter didn't get a reply so I assume I have the wrong information.

Any information would be gratefully appreciated.

73
Stephen ZL4HG

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Date: Sat, 8 Oct 1994 02:45:15 GMT
From: jnormandin@umassd.edu (JERRY NORMANDIN)
Subject: WTB: Radar gun...

In article <373pj9$600@news.it.gvsu.edu>, hutchine@river.it.gvsu.edu
(E.Hutchinson-N8XHP) writes:
>    I am looking to purchase a CHEAP, USED radar gun...X or K band
>is not important.  Wanted to take surveys in the area for school project.
>Any suggestions for a inexpensive gun would be appreciated.  So did up
>all those boxes and look for a radar gun in your junk boxes...Please
```

>reply to personal E-mail...Thanks in advance...
>
>-=> Eric <=-
>
>--
>=-=
>= Eric M. Hutchinson - N8XHP   Grand Valley State University =
>= * HAZMAT *   Allendale, Michigan   * BLS/CPR * =
>=-=-=-=-=-=-=-=-=-=-=-=hutchine@river.it.gvsu.edu-=-=-=-=-=-=-=-=-=-=-=-=-=-=
MAKE SURE YOU USE CAUTION WHEN YOU USE THE RADAR GUN!! THEY CAUSE CANCER!
That's why Laser RADAR is now used!

End of Info-Hams Digest V94 #1104
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